

MODULE 3

Introduction to The EMDPRS and 32 Chief Complaint Types

MODULE OVERVIEW

The major "tool of the trade" for EMDs is the Emergency Medical Dispatch Protocol Reference System (EMDPRS). Understanding the layout and design of the EMDPRS is essential to helping you do your job in the most effective manner. It is important to also understand the general medical content represented by the thirty-two chief complaint types covered here. The medical content of these thirty-two chief complaints covers information that should be contained in every EMDPRS. It is important to note, however, that not all EMDPRS **have** thirty-two chief complaints.

Module 3, Introduction to The EMDPRS and 32 Chief Complaint Types, introduces you to the basic layout and structure of Emergency Medical Dispatch Protocol Reference System (EMDPRS) protocol cards. You will learn about the three types of protocol cards, major groups of information, and you will be introduced to your local EMDPRS and its structure.

This module also covers the major chief complaint types. You will learn about the three categories of complaints (based on the medical event) and then proceed to learn about the thirty-two complaint types that are used to develop the protocols. Also presented is the major medical information that you need to learn about each, including any special pediatric considerations you should know.

Module 3 contains the following Units:

Unit 1: Introduction to the EMDPRS

Unit 2: Introduction to the 32 Chief Complaint Types

MODULE OBJECTIVES

Upon completion of this module, you will be able to:

1. Identify the three categories of protocols within an EMDPRS.
2. Identify the design components of each protocol within the EMDPRS.

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3. Explain the purpose and kinds of information found in each of the components of the protocols of an EMDPRS.
 4. Discuss/identify the categories of medical complaint types.
 5. Describe the contents and structure of an EMDPRS.
 6. Demonstrate use of each of the thirty-two chief complaint cards using your locally approved EMDPRS.
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MODULE 3 - UNIT 1

Introduction to the EMDPRS

UNIT OVERVIEW

Aside from good telecommunications skills, good judgment and satisfactory operational equipment, the most important tool available to the EMD is the Emergency Medical Dispatch Protocol Reference System, aka EMDPRS.

Unit 1, Introduction to the EMDPRS, teaches you to understand the basic concepts behind the development and arrangement of information in the EMDPRS. You will learn that all EMDPRSs contain basically the same types of information, and in relatively the same order. By learning the types of information found in an EMDPRS, you will be able to quickly understand and use *any* EMDPRS.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

1. Identify the three categories of protocols within an EMDPRS.
2. Identify the design components of each protocol within the EMDPRS.
3. Explain the purpose and kinds of information found in each of the components of the protocols of an EMDPRS.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

- 1.1 Identify the three types of protocols within an EMDPRS.
- 1.2 Describe the differences in content between the three types of protocols within an EMDPRS.
- 2.1 List and describe the major sections of protocols within an EMDPRS.

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- 3.1 Describe the types of information gathered or provided, for each section, for each of the three types of protocols within an EMDPRS.
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Introduction to EMDPRS

Structure and Layout

The Emergency Medical Dispatch Protocol Reference System (EMDPRS) is frequently referred to as "guide cards, protocol cards, scripts or cards."

Every agency has its own set of locally medically approved protocols. Their structure and contents vary from agency to agency, but overall they tend to contain similar information. It is up to you to practice regularly with the EMDPRS used by your agency.



NOTE:

This unit illustrates the types of information found on most EMDPRS cards. ***The EMDPRS sample pages you will receive while training on this unit are generic and are not approved for use once you return to your agency.*** Locally approved cards will be reviewed at the end of this unit.

EMDPRS protocols are designed to present medical information in a logical and structured sequence. The order in which the information is shown on protocols will vary, based on the information that your local medical advisory personnel determines to be most important.

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Introduction to the EMDPRS



Descriptions of Three Protocol Types. Generally, all EMDPRS contain, at a minimum, three protocol types. Each of these protocols is designed to meet a specific need. These needs are described on the following pages. The protocol types are as follows:

1. **The Initial Survey/All-Caller Interrogation Protocol.** This protocol is used to conduct the initial questioning of all callers, in an effort to gather criteria that help you to focus your information gathering activities.

The initial survey protocol lists the questions to be asked of **every** caller. Questions are used to gather **location** (including telephone number) and **patient status information** (like patient age, status of breathing and level of consciousness). The information you get from the caller forms the basis for dispatch, information dissemination and further inquiry (as indicated by the EMDPRS).

It is very important that you use this card for every call you take. This card points you to the proper protocol card and helps you focus the caller. It is the very first step in getting the *Where, What, How, Who, When* information you need for effective dispatch.

Initial Survey

- ▶ Used to conduct initial questioning of caller
- ▶ Asked of every caller
- ▶ Location and Chief Complaint Data

3-1-1



2. **The Individual "Chief Complaint" Protocol.** The individual "chief complaint" protocol is used to get information from all callers regarding the type and severity of medical emergency being reported.

The individual "chief complaint" protocol is used by EMDs to verify (and get more) information on the chief medical complaints being reported by callers.

Individual Chief Complaint Protocol

- ▶ Used to get information regarding type/severity of medical emergency
- ▶ Used to verify information gathered during all-caller interrogation

3-1-2



NOTE:

Experience indicates that the information found in the thirty-two chief complaint types discussed during this training represent the majority of emergency medical conditions that are likely to be reported by callers. Remember, many programs will have different groupings of these thirty-two chief complaint types.



3. **Information found in each of the thirty-two chief complaint protocols.** Each of the thirty-two protocols contains four major design components:

- a) *Key Questions and Inquire of Caller.* The purpose of these two sections is to gather additional, specific information not received or asked for by the initial survey protocol.

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The "Key Questions" section lists important questions that you need to ask in order to gather additional medical information about the patient's condition.

The "Inquire of Caller" section is used to help guide callers into giving you better, clearer information. Caller responses to these questions give you the information you need to determine the appropriate telephone medical instructions to give callers when (and if) required.

- b) *Dispatch Priorities (aka "Medical Dispatch Criteria")*. The "Dispatch Priorities" section identifies the proper types of response allocations that are appropriate to the situation. Responses are prescribed and approved by the local Medical Director.



NOTE: You should be able to dispatch the proper medical response to the scene based on the information gathered in the "Key Questions" section.

- c) *Pre-Arrival Instructions*. The purpose of this section is to list the basic information that you should give callers. It does not include medical instructions. It also helps you prepare callers for the arrival of the medical personnel you dispatched.
- d) *Useful Information*. This section gives you additional information about the medical situation including insights and possible complications.

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**NOTE:**

The information in the "Useful Information" section is designed specifically to expand your knowledge, relative to the chief complaint type being reported by the caller. It is not intended to be shared with callers.

An example of the Individual "Chief Complaint" Protocol is the ABDOMINAL PAIN/INJURY card.

Information Groups

Found on All Chief Complaint Types

- ▶ Key Questions and Dispatch Priorities
- ▶ Inquire of Caller
- ▶ Pre-Arrival Instructions
- ▶ Useful Information

3-1-3



4.

The "Scripted Medical Protocol." The "scripted medical protocol" is a special type of protocol. These protocols give scripted telephone medical instructions (i.e. - protocols) that you are supposed to give to callers when immediate care needs to be given to victims in order to save their lives. These must be read aloud to the caller, word-for-word. The instructions that you give callers help them apply life-saving treatments to the victim prior to the arrival of dispatched responders.

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Examples of the scripted medical protocol are the **CPR, CHOKING, CHILDBIRTH and AIRWAY MANAGEMENT** cards. These protocols contain the scripts you would use to provide telephone medical instructions to callers in this situation.

The scripted medical protocol may include additional information that can help you motivate and encourage callers to follow the instructions, to describe precautions callers should take and describe signs that callers can look for while administering telephone directed medical treatment provided by the EMD.

Scripted Medical Protocol

- ▶ Has four major groupings plus 1 new section called "Protocol"
- ▶ Protocol section gives telephone instructions in script format that EMD reads to caller
- ▶ May contain additional information used to motivate callers, etc.

3-1-4

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Introduction to the EMDPRS

Summary

This unit has introduced you to the basic design and structure of an EMDPRS. You have been trained on the three card types (All-Caller Interrogation, Individual "Chief Complaint" Protocol, and Scripted Medical Protocol) and the major sections of the cards. This unit also trained you on the information types found in each section of a card.



Remember, the cards you use back at your site must be approved by the medical director of your EMD program.

The next unit introduces you to the thirty-two chief complaint types. Module 3, Unit 2 provides you with basic medical information for each complaint type. Also, you will be trained on the use of your local medical protocol card for each complaint type.

MODULE 3 - UNIT 2

Introduction to the 32 Chief Complaint Types

UNIT OVERVIEW

Your position as an EMD requires familiarity with a large number of medical complaints. Experience indicates, however, that there are generally thirty-two complaints that occur most frequently.

Unit 2, Introduction to the 32 Chief Complaint Types provides you with general medical information about the thirty-two chief complaint types. You will review the information provided in this trainee guide **and** the information found in your locally approved EMDPRS.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

4. Discuss/identify the categories of medical complaint types.
5. Describe the contents and structure of an EMDPRS.
6. Demonstrate use of each of the thirty-two chief complaint cards using your locally approved EMDPRS.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

- 4.1 Identify the thirty-two chief complaint types.
- 4.2 Define/discuss the difference between an individual chief complaint, a traumatic chief complaint type and a time/life-critical chief complaint type.
- 4.3 Discuss the difference between signs and symptoms.

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- 4.4 Describe how to identify "chief complaints."
 - 5.1 Discuss the purpose/focus of the questions for each category of chief complaint type (individual vs. traumatic vs. time/life-critical events).
 - 6.1 Demonstrate using the EMDPRS with a call about a specific complaint type.
 - 6.1.1 Identify critical elements in cardiac arrest survival.
 - 6.1.2 Describe the role of the EMD in providing telephone CPR.
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Introduction to The Chief Complaints

A Quick Review of Important Concepts



Overview of The Process. As you have already learned, every caller undergoes some sort of initial questioning to identify if the patient is conscious and/or breathing. In some systems this is called the *"Initial Survey,"* the *"All-Caller Interrogation"* or *"Entry Level Interrogation."*

Normally the process begins with the initial survey. This initial survey and the answers you receive from the caller direct you to the proper individual chief complaint card, which is followed by specific key questions as directed by the card. Once you get this information, you can make a decision on unit response configuration and mode and dispatch units to the scene. You can now return to the caller and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.

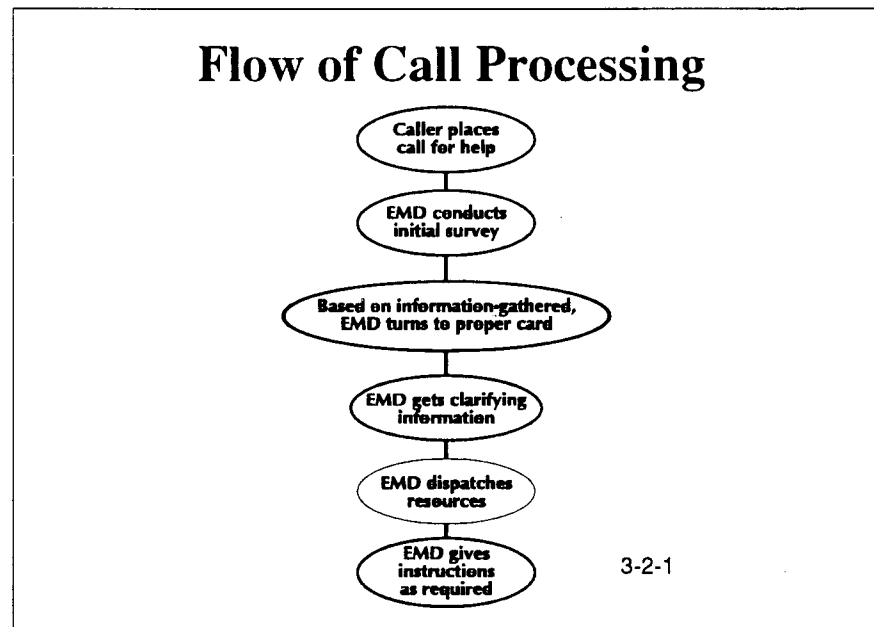
After the location and call-back number have been determined, you continue the initial assessment and get the patient's age, status of consciousness and status of breathing. If the patient is conscious or unconscious and breathing, the dispatcher immediately knows that the patient is alive and now has a little more time to get specific information from the caller about the patient's condition. This enables you to send resources in the proper response configuration and mode. This also allows you to give the caller accurate and useful pre-arrival (post-dispatch) instructions.

If the patient is unconscious and not breathing, or if the patient is unconscious and the caller can't tell if the patient is breathing or not, you should assume a possible cardiac arrest situation exists and turn immediately to the appropriate protocol for the provision of CPR.

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The CPR protocol has clear and understandable instructions that take the caller through airway interventions prior to the provision of chest compressions. If the patient has merely choked and is not in cardiac arrest, you need to provide the instructions for choking intervention rather than CPR. The design of the protocol guides you through this process.



Caller emotional status. Remember that the caller's emotional status is not a clear indication of the medical problem's severity. You must adhere to the questions found on the protocol and make decisions based on the symptoms that are reported and the existence (or absence) of symptoms that indicate the need for a high priority response.

The most common high-priority symptoms included in the majority of EMDPRS are chest pain, breathing problems, altered levels of consciousness and, in some cases, severe hemorrhage. In most cases, when these symptoms are reported, you will initiate a high level ALS response due to the potential severity of the situation.

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Signs and Symptoms. As you may recall from Module 1, there is a difference between *signs* and *symptoms*. Signs are things that are found upon examining the patient. Examples of signs include thready pulse, spurting blood, cyanosis (turning blue) and diaphoresis (sweating). Symptoms are things that the patient complains of that s/he is feeling. Examples of symptoms include "*I'm hot/cold,*" "*I'm having a hard time breathing*" and "*I can't feel my toes.*"



Identifying the Chief Complaint. This is part of the "initial survey." It is important to remember that the chief complaint is that which is most paramount on the patient's (or caller's) mind.

Patients with multiple complaints will most frequently identify the chief complaint first and then go on to list the secondary complaints, many of which will be symptoms of the chief complaint. Asking "What's wrong?" often confuses the caller and causes them to assume you are asking for a diagnosis. Ask questions that elicit short and descriptive responses from the caller. They are your eyes at the scene, so ask them "What do you see? Tell me what is happening!"

When a caller presents you with multiple chief complaints that seem to have no relationship with each other, you need to select the one that has the most potential to worsen or that has the highest priority symptoms.



The Flow of Call-Processing. Your call-processing should follow a smooth pattern and logical flow. Normally the process begins with initial entry-level questioning, followed by specific key questions. Once this information is obtained the EMD can make a decision on unit response configuration and mode and dispatch units to the scene. The EMD can now return to the phone and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.

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Prior to terminating the phone call with the caller, the EMD should ensure that the patient has a clear airway and is breathing. You should also instruct the caller to turn patients gently on their side if they should vomit (unless spinal injury is suspected). In minor or less urgent cases, you need to tell the caller to call back if the patient's condition changes before help arrives.

Medical Complaint Types: Individual Chief Complaints, Traumatic Incidents and Time/Life-Critical Events



Generally speaking, there are two medical complaint types; *Individual Chief Complaints* and *Traumatic Incident Types*. In most cases, the calls you receive fall into these two categories. However, there is a subset of these calls that are also very important for you to know and understand. This subset is called the *Time (or Life) Critical Events*.



Individual Chief Complaints. It is common to assume that all reported problems are individual chief complaints. In some respects that is the case. However, in the field of emergency medical dispatch, there is a distinction between individual chief complaints and traumatic incidents.

Individual chief complaints typically are general medical problems. A medical problem is generally defined as "an illness, either acute or chronic." Proper response and pre-arrival instructions in these cases is based on your ability to gather information regarding:

1. the patient's chief complaint;
2. the patient's age;

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3. the patient's *priority* symptoms (if present) such as severe bleeding, decreased levels of consciousness, respiratory difficulty and chest pain and
4. any patient medical history that is relevant to the situation at hand.

The focus of your questioning is on the existence or lack of priority symptoms most often associated with that particular chief complaint type. In addition, the patient's medical history and age are factors in determining the potential severity of the problem.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to keeping the patient's airway clear, keeping the patient comfortable, gathering patient medications and advising the caller to call back if the patient's condition changes before help arrives.

Individual Chief Complaints

- ▶ Based on acute or chronic biological illness
- ▶ Proper responses based on...
 - chief complaint
 - patient's age
 - priority symptoms identified
 - relevant medical history

3-2-2



Traumatic Incident Types. Trauma is generally defined as "some physical injury caused by accident or violence." Proper response and post-dispatch instructions in these cases rely on your ability to gather information regarding the nature of the incident type (aka "mechanism of injury"), where the injuries are (core of the body or extremities?) and the identification of priority type symptoms.

Trauma denotes a situation in which a patient has sustained some injury either by accident or violence. The chief complaint is usually reported in the form of a verb (he got hit, shot, cut, etc.) or by a description of the mechanism of injury (an auto pedestrian accident, he fell off the roof, etc.).

Traumatic incident types should be assessed differently by EMDs than individual chief complaint types, because the factors used to determine response levels are different. Studies have shown that the following are the primary determining factors in response when dealing with traumatic incidents:

1. the mechanism of injury;
2. where the injury is located (central or peripheral, torso or arms and legs) and
3. significant priority symptoms (usually altered levels of consciousness indicative to the onset of shock, a head injury, or an underlying medical problem; severe hemorrhage or breathing problems associated with injuries to the central core).

Pre-arrival (post-dispatch) instructions vary widely, based on the situation and complaint type reported. They include the same instructions in many cases as the individual chief complaints, especially as they relate to airway control. However, traumatic incident protocols include more specific injury-related instructions. These directions are designed to protect the patient from

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receiving further injury from a well-meaning, but untrained, bystander who attempts to help.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to ensuring the safety of the scene (patients, bystanders and responders). Instructions are provided for the control of external bleeding, ensuring the patients airway is clear, advising the caller when it may be best to do nothing, advising the caller to guide the units to the patient and advising the caller to call back if the patient's condition worsens.



Specific Pediatric Considerations (Traumatic Incident Types). Accidents are the most common cause of death in childhood, killing more children than cancer, meningitis, congenital defects, and heart disease combined. Over **three thousand** deaths per year occur in infants (under the age of one) from falls, burns, drowning, choking and suffocation. For every accidental death, one hundred children are seriously injured.

Traumatic incident types are by far the most common chief complaint grouping used to report incidents involving children. With regard to CPR and choking intervention, children should be defined clearly as an infant (0-1 year old); child (1-8 years old); or adult (> 8 years old) according to the American Heart Association and the American Red Cross. These conventions should be considered when your agency is developing continuing education or conducting initial training.



In cases of traumatic injury the child should not be moved unless in danger. A common error made at the scene of an injury is for the caller to move or pick up the child, run into the house or shelter and hold the child to comfort him/her. This can prove to be devastating to the child with spinal injuries which can be worsened when the child is being moved by concerned but untrained bystanders. If the child has gotten up and run into the house, she should lie down on a flat surface and be comforted while being kept still and reassured by bystanders.

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A spinal cord injury should be suspected if there is any indication of:

1. severe facial or head injuries;
2. unconsciousness reported associated with the incident;
3. numbness, tingling or loss of sensation in any extremity(ies);
4. paralysis or inability to move any extremities;
5. pain in back upon movement or attempt to move or
6. any motor dysfunction reported by the caller.

Children may have critical injuries, but the symptoms may remain hidden until the child reaches a point of rapid deterioration. Critical symptoms such as low blood pressure do not appear as rapidly in children as they do in adults. Other symptoms like breathing and pulse may be difficult to interpret in a child who is hurt or frightened. If priority symptoms are present, time is critical and the child must be taken immediately for care.

Conscious injured children require extra attention, support and reassurance, preferably from a single consistent bystander. This must be communicated through the EMD to the bystander.

Remember, *the emotional condition of the patient and/or caller should not be used as indicator of the severity of the problem.* Lacking experience and knowledge, children may not understand the severity of an incident and may appear to be very calm in the face of crisis. Likewise, bystanders and children may be distraught from witnessing the incident, reacting to the sight of blood or arms and legs bent at unnatural angles.

Prevention is the most powerful treatment for most childhood injuries. The EMD can play a role in injury prevention by recognizing and reporting traffic,

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playground or other hazards as they are identified in calls relating to childhood injuries.

Traumatic Incident Types

- ▶ Based on some physical injury due to accident or violence
- ▶ Responses based on...
 - mechanism of injury
 - location of injury (core or extremity?)

3-2-3



Time/Life-Critical Chief Complaint Types. These are a subset of individual chief complaints and traumatic incident types. They pose the greatest danger to the patient, bystanders and/or responders.

Care should be taken with these cases to ensure that appropriate pre-arrival (post-dispatch) instructions are given and that information regarding the safety of the scene is relayed to the responding units.

Calls of this type may be specifically medical in nature like cardiac arrest, choking, childbirth, unconsciousness, CO poisoning/HAZMAT.

Other calls received may have traumatic and individual chief complaint components included in the problem. Examples include a drowning victim with respiratory difficulty and neck pain from a shallow water diving incident; an electrocution victim with possible internal

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burn who has fallen off the telephone pole and who also may have traumatic injuries from a long fall.

Proper call handling relies on your ability to gather information about the chief complaint. It also requires that you gather information about the safety of the scene and other important factors that may require you to dispatch ancillary agencies (like police, fire and/or HAZMAT units).

Pre-arrival or post-dispatch instructions relate primarily to the scripted CPR, choking and childbirth instructions along with situational instructions for specific medical or traumatic incident types with a focus on scene safety.

Time/Life-Critical Events

- ▶ Pose greatest danger to patient, bystanders or responders
- ▶ Responses based on...
 - scene safety information
 - police, fire, HAZMAT, etc. needs

3-2-4

Philosophy of the Design and Use of the EMDPRS

This unit presents chief complaint information in the order described below. Chief complaints are alphabetized within each of the following groupings:

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1. Traumatic Incidents;
2. Individual Chief Complaints and
3. Time/Life-Critical Events.



NOTE: In the "real-world," each EMDPRS may be arranged differently based on the decisions made by the local medical authority. In most EMDPRSs, complaint types are arranged alphabetically.

Philosophy of Use. When determining what an EMDPRS should look like or how it should be used, medical advisors consider the following questions. Should my EMDPRS be a strict protocol or a dispatch guideline? Should we mandate its use or make it optional?

In your area, use of the EMDPRS may vary from someone who works in another agency or city. It is up to you to be aware of the policies your agency has set up for using the locally approved EMDPRS.



Design Philosophy. In Unit 1 of this Module you were presented information on the design of EMDPRSs and were also given the opportunity to study the structure of your local EMDPRS. The major elements presented were:

1. the Initial Survey/All-Caller Interrogation;
2. the Individual Chief Complaint Protocol;
 - a. the "Key Questions" sections of a protocol and the information found there;
 - b. the "Dispatch Priorities" section of a protocol and the information found there;
 - c. the "Protocol" section that is found only on "Scripted Medical" protocols, and the information found there and

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- d. the "Additional Useful Information" section and the information found there and;

3. the Scripted Medical Protocol.



Specific design characteristics of the EMDPRS. The EMDPRS is designed to maximize EMDPRS use and flow. The EMDPRS determines:

1. the **order** that various actions are taken by the EMD;
2. when the EMD is to dispatch resources;
3. the **mode** (Hot vs. Cold) and **configuration** (Type of Unit or Units) of the response and
4. when the EMD is to provide instructions.

EMDPRS Determines...

- ▶ Order of EMD actions
- ▶ When to dispatch resources (types and configurations included)
- ▶ Assigns mode and configuration to responding personnel
- ▶ Tells when to give telephone medical instructions
- ▶ Tells when/how to end the call

3-2-5

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Detailed Review of the Thirty-two Chief Complaint Types



Traumatic Incident Types. Following is a detailed review of the eleven Traumatic Incident Type protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS protocol for the given chief complaint.

1 - Animal Bites (Traumatic Incident Type)

1. Background:
 - a. Except in rare instances, animal bites are non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.
 - b. Identification of high level emergencies rely on the identification of severe bleeding, the site of the bite and the level of consciousness of the patient.
 - c. Animal control should be contacted to attempt to identify and quarantine the animal.
 - d. It is important to determine the type of animal and where the animal is at the time of the call.
2. Common Causes:
 - a. The most common animal bite is a dog bite. However, many individuals are bitten by unusual or exotic animals they may have as pets.

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- b. In some areas of the country, snake bites are fairly common.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Solitary bites, often without serious bleeding.
- 4. Instructions Commonly Provided:
 - a. Monitor and maintain patients airway, especially if patient is nauseated or vomiting.
 - b. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS; allow patient to assume a comfortable position.
 - 3) Keep patient warm.
 - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
 - c. Control bleeding with direct pressure.
 - d. Call back if the patient's condition changes before help arrives.
 - e. For snake bites, DO NOT ELEVATE THE BITTEN AREA, DO NOT USE ICE and DO NOT ATTEMPT TO REMOVE VENOM IN ANY WAY. Reassure caller that most snake bites are not life-threatening.

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- f. Regardless of how minor the bite seems to be, patients should be advised to seek medical attention.
 - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Children are common victims of pet bites, and their smaller size and uncontrolled reactions to animals make them more likely than adults to suffer serious facial injuries.
 - b. In situations where envenomation (venom injected into bloodstream) is possible through snake, fire ant, scorpion and spider bites, children will commonly suffer more severe reactions, including death, than will adults.

2 - Assault/Sexual Assault (Traumatic Incident Type)

- 1. Background:
 - a. These chief complaints often pose a danger to the responders and the bystanders as well.
 - b. Sexual assaults often are accompanied by traumatic injuries. The EMD should assume there are physical injuries in these cases.
 - c. The victim should be protected from further injury if possible.

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- d. Information should be relayed to responding crews regarding scene security, particularly if the assailant is nearby. In these cases, responders should be advised to stay away until the police secure the scene and the evidence.
 - e. **PRESERVATION OF EVIDENCE.** *The EMD should advise callers **not** to bathe or shower, change clothes, and not to eat or drink anything until help arrives and gives them instructions.*
 - f. In cases of sexual assault, Crisis Intervention counselors should be notified per departmental standard operating procedures (SOP).
- 2. Common Causes: Self Explanatory
 - 3. Common Symptoms Described by Caller (presentation)
 - a. Often the caller exhibits a high emotional content due to the frightening nature of the situation. Compassion and patience should be exercised by the EMD.
 - b. Psychological and/or physical injuries present.
 - c. Facial injuries commonly accompanied by severe bleeding.
 - 4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is unconscious, nauseated or vomiting.

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- b. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) Keep patient warm.
 - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
 - c. Control bleeding with direct pressure.
 - d. Call back if the patient's condition changes before help arrives.
 - e. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Most pediatric cases of assault/sexual assault are reported as child abuse situations. Twenty-five percent of child abuse cases involve patients under the age of 2 leaving seventy-five percent in all other age groups up to the age of 16. Twenty percent of physically abused children are permanently injured. There are over 2000 deaths annually in the U.S. from abuse and neglect.
 - b. Intentionally inflicted injury is one of the leading causes of death in children under 5, with over 2000 deaths annually in the US. However, the call to EMS will rarely describe the incident as assault or abuse. EMS providers should therefore always be

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alert to the possibility that what appears to be an accidental injury in a young child may have in fact been inflicted. Pediatric cases of assault/sexual assault should be reported as child abuse. In most states EMS providers are considered mandated reporters of suspected child abuse or neglect and as such, in most states, are protected against charges of libel when reporting suspected child abuse.

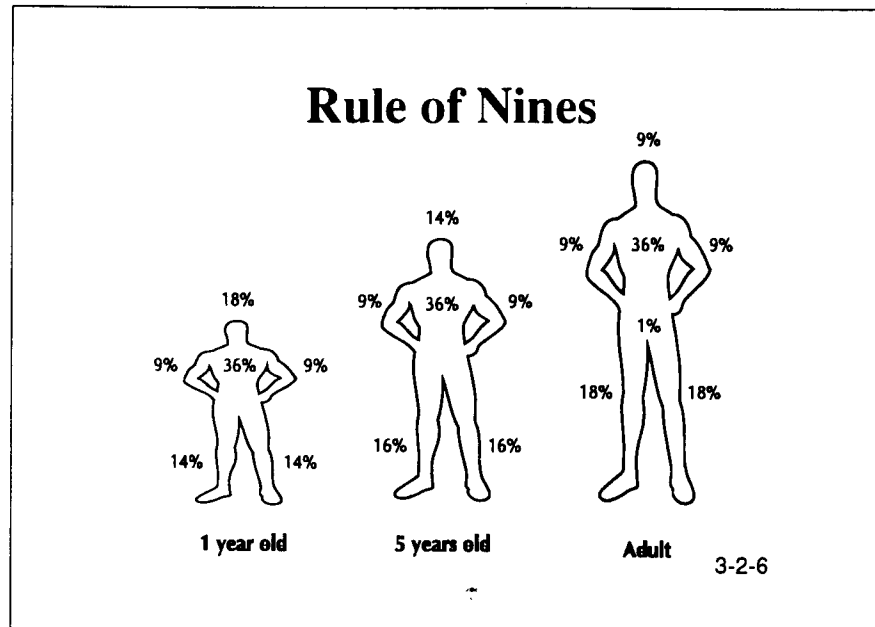
3 - Burns (Traumatic Incident Type)

1. Background:
 - a. There are various types of burns encountered in EMS including thermal burns, chemical burns and electrical burns.
 - b. The size and severity of the burn usually determines the level of emergency represented by a particular incident.
 - c. The size of a burn is usually based on the total body surface area that has been affected. This is done in multiples of nine commonly referred to as the "Rule of Nines." Usually, second-to-third degree burns over twenty-percent of the body warrant emergency responses.

Look at **Figure 3-2-6**. The arms each represent about nine percent of total body area. The torso represents thirty-six percent of total body surface area (eighteen percent for the front - or chest area - and another eighteen percent for the back).

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- d. Burns are classified as first, second or third degree indicating the depth of the burn. First being sunburn like, second resulting in blistering and third involving all layers of the skin and underlying tissue. This is sometimes called a full thickness burn.
- e. The rule of nines does not accurately predict surface area of children under age eight. A useful estimate can be made by assuming that the palm of the child's hand approximates 1% of his/her body surface area; the burn size can then be estimated by the number of "hands" needed to cover the burn.
- f. Electrical burns should always be assumed to be worse than they appear on the surface, as internal burns may be present between the point of contact and the site where

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the electricity grounded out of the patient.

- g. Patients with facial burns (particularly thermal) should be monitored closely by the EMD for possible airway complications.
 - h. It is important to determine if anything is still burning and if so, advise the caller to evacuate the dangerous area if safe to do so.
 - i. In cases of burns that occur in enclosed areas, be aware of the possibility of carbon monoxide (CO) or other toxic poisoning/ inhalation.
- 2. Common Causes:
 - a. Thermal burns from a heat source.
 - b. Chemical burns from an acid or lye compound.
 - c. Electrical burns from an electrical source.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Burns are usually very painful as described by the caller.
 - b. The caller may describe blistering or the peeling off of skin.
 - c. Patients with electrical burns may be described as unconscious. If this is the case assume cardiac arrest and prepare to perform CPR.

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4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is unconscious.
 - b. Cool small burns (ten percent or less total body area) with clean water.
 - c. If the patient is still burning, extinguish flames with water or roll patient in a blanket or whatever is handy. DO NOT REMOVE BURNT CLOTHING.
 - d. Do not apply anything to the burned area. Attempt to keep it clean and the patient covered.
 - e. Continuously irrigate or flush all household chemical burns with water until help arrives.
 - f. Caution caller to be aware of electrical hazards if electrical burn is reported. Be particularly aware of electrified water. If the patient is still in contact with the electrical source do not touch them.
- g. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) KEEP PATIENT WARM (maintain body temperature).

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- h. In cases of Industrial chemical exposure, contact HAZMAT resources according to local HAZMAT procedures.
 - i. DO NOT GIVE THE PATIENT ANYTHING TO EAT OR DRINK. In cases of internal burns from a caustic ingestion from an acid or lye, advise giving the patient water to dilute the chemical if possible.
 - j. Call back if the patient's condition changes before help arrives.
 - K. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Electrical burns, chemical, thermal burns and scaldings are the most common burns in children.
 - b. Scald burns common to the toddler aged child frequently cause more extensive damage than a similar burn in an adult or older child because the skin is thin. Scald burns that blister initially like a second degree burn may in fact be subsequently revealed as third degree or "full thickness" burns.
 - c. In addition to size and depth of the burn, other factors that contribute to the severity of burns in children include:
 - 1) the age of the child (worse outcome under 2 years)

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- 2) the location (hands, face, perineum may require specialized care)
 - 3) underlying medical conditions (diabetes, heart conditions, immune suppression)
 - 4) associated injuries
 - 5) intentional burns (abuse)
- d. If a flame or explosive burn occurred within a closed space, the possibility of thermal injury to the respiratory tract must be carefully evaluated. Signs include singed nasal hairs or soot in the sputum ("spit"). Symptoms include cough, wheezing, hoarseness, noisy or rapid breathing. Children with thermal injury to the airway may have rapid swelling resulting in partial or even complete airway obstruction and may need early and aggressive airway management by skilled providers.

4 - Eye Problems/Injuries (Traumatic Incident Type)

- 1. Background:
 - a. The eye is a resilient structure made of very fibrous tissues. The globe of the eye is difficult to lacerate or penetrate. If the injury is a penetrating object, consider that it may have hit the eye with sufficient force to go through the eye and into the cranium. This may result in an underlying head injury. If the level of consciousness is dropping or altered this should be suspected.

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- b. The fluids in the eye are very fragile. If the eyeball is cut open or leaking fluid then it should not be touched or bandaged. The caller should be advised to not put direct pressure on the eye to arrest bleeding. The patient should sit up and be calmed until help arrives.
- c. Chemicals and foreign bodies are common injuries to the eye. The eye should be irrigated with room temperature water until help arrives.
- d. The caller should not attempt to remove any impaled objects in the eye. This may cause further damage to the eye.

2. Common Causes:

- a. Severe eye injuries include penetrating wounds to the eye, lacerated eyes, retinal detachments and eye injuries associated with lowered levels of consciousness possibly indicative of an underlying head injury.
- b. Common moderate eye problems include chemicals in the eye, arc welding burns and other thermal burns of the eye.
- c. Minor eye problems include contact lens problems, foreign bodies, corneal abrasions and contusions from orbital fractures (fractures of the bones surrounding the eye).

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3. Common Symptoms Described by Caller (presentation)
 - a. Severe pain and discomfort. This is particularly true with foreign bodies in the eyes.
 - b. Bleeding is usually minimal unless surrounding facial trauma is associated with the injury.
 - c. If the eyeball itself has been lacerated or punctured there may be a pinkish fluid leaking out of the eye. This may be the fluid within the eye and the caller should be advised to do nothing to treat this injury until help arrives. Tell the caller NOT to bandage the eye, or put any pressure on it.
 - d. Penetrating object visible. Advise the caller not to remove the penetrating object.
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient has lowered level of consciousness.
 - b. Allow patient to assume a comfortable sitting position.
 - c. If the patient has a small foreign body (like dust or small dirt particles) or a chemical in the eye, it should be irrigated until help arrives. Have the caller irrigate the eye under a steady stream of room temperature water and irrigate the eye with the injured eye downhill from the nose. If the eye is being irrigated outside with the

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water hose, advise the caller to run the water until any hot water in the hose has been flushed out to prevent further injury to the patient.

- d. If the eyeball is cut or leaking fluid it should not be touched, bandaged or otherwise disturbed by bystanders. The patient should be made to sit up and be calmed until help arrives.
 - e. Treat for shock:
 - 1) Keep patient warm (maintain body temperature).
 - 2) DO NOT GIVE PATIENT FOOD OR DRINK.
 - f. Call back if the patient's condition changes before help arrives.
 - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. A child with an isolated eye injury is best transported with a parent or other familiar adult to help maintain the position of comfort. Attempts to restrain the child may elevate intraocular pressure.

5 - Fall Victim (Traumatic Incident Type)

- 1. Background:
 - a. This protocol is useful for falls where back or other injuries have occurred.

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- b. A long fall may be considered any fall that exceeds the height of the patient. Falls of greater than six feet are often considered long falls.
 - c. With any long fall the EMD should suspect that a spinal injury exists and use spinal precautions in providing telephone aid.
 - d. Long falls are usually third party in nature requiring the EMD to provide instructions through the third party.
 - e. Falls may have been preceded by a medical incident. This information should be relayed to the responding personnel.
 - f. The length of the fall is the easiest determinant of severity. The EMD must be mindful that external trauma as well as internal injury may exist.
 - g. Any fall victim reported to be unconscious or with associated head or facial injuries should be assumed to have a spinal cord injury. Do not move the patient.
 - h. Falls in the elderly resulting in hip or wrist fractures are a common complaint.
 - i. Ground level falls resulting in minor injury are another common call you will receive.
2. Common Causes:
- a. Medical causes such as epilepsy, CVA (stroke), fainting, etc.

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- b. Industrial and construction accidents.
 - c. Environmental factors like ice, snow, alcohol, drugs, etc.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Visible external trauma.
 - b. Numbness, tingling or loss of movement in cases of associated spinal cord injury.
 - c. Anxiety due to the mechanism of injury.
- 4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if the patient has a decreased level of consciousness.
 - b. Do not move the patient, do not splint the injuries or otherwise disturb the patient unless there is an airway compromise.
 - c. Treat for shock:
 - 1) Keep patient warm (maintain body temperature).
 - 2) DO NOT GIVE PATIENT FOOD OR DRINK.
 - d. Use direct pressure to control external bleeding.
 - e. Call back if the patient's condition changes before help arrives.

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- f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Some special categories of falls exist for children, including walker falls, playground falls, falls from buildings and inflicted injury attributed to an accidental fall.
 - b. Toddlers and infants can sustain skull fractures and potential brain injury in falls under four feet *if the contact surface is not shock-absorbing* (i.e., falls from shopping cart to a concrete or tile surface, from beds or changing tables to uncarpeted floors, or down uncarpeted stairs in a walker).
 - c. The severity of playground injuries relates to the height of play structures and the shock absorbing qualities of the contact surface.
 - d. Accidental falls from windows happen commonly during the summer months and can be prevented by window guards, but children also fall from windows because they are pushed or because they are deliberately jumping to escape perceived threat or to attempt suicide.
 - e. Injuries attributed to a fall from a mechanism that is not developmentally likely or possible may be due instead to child abuse/inflicted injury. (An example might be a one month old said to have fallen from the changing table, at an age when most infants cannot roll from back to stomach.)

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6 - Heat/Cold Exposure (Traumatic Incident Type)

1. Background:
 - a. Heat related problems can be classified as either heat exhaustion or heat stroke, the latter representing a more serious situation.
 - b. Heat exhaustion is caused by a metabolic imbalance resulting in flu like symptoms such as pallor, nausea and vomiting. In this case the patient should be moved to a cooler environment and be given fluids to drink (UNLESS THE PATIENT IS NAUSEOUS OR VOMITING). Heat exhaustion usually is secondary to outside exertion in hot and humid weather.
 - c. In cases of heat stroke the body loses it's ability to thermoregulate itself. The body core temperature rises and the patient's level of consciousness decreases. Frequently, the patient will feel hot and dry to the touch, though they may also be profusely sweating (if they were engaged in some physical exertion). In some cases, the skin will appear reddened. The patient should be moved to a cooler environment and cooled with water. The patient should not be given fluids or anything to drink.
 - d. Cold related problems are usually frost bite or hypothermia, the latter representing the more serious situation.
 - e. Frost bite represents a condition that results in the freezing of the

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peripheral and exposed areas, usually the fingers and toes. The tissue should not be rubbed to rewarm the tissue. The extremities should be kept warm and dry until help arrives. Prevention of further exposure and injury is the focus in these cases.

- f. Hypothermia results when the body loses its ability to thermoregulate itself and generate heat internally. The body core temperature drops and the patient's level of consciousness decreases. The patient must be removed from the cold environment and warmed. No fluids should be given to the patient in this case.
 - g. Long exposure and hypothermia may cause cardiac arrest. "No patient should be assumed dead until he is warm and dead." Provision of telephone CPR, in cases of hypothermia, should be determined by local medical control.
 - h. Hypothermia patients are prone to ventricular fibrillation with rough handling. Sometimes just moving the patient to the ambulance stretcher will put them into fibrillation. Caution is advised in moving these patients.
- 2. Common Causes:
 - a. As noted previously.
 - 3. Common Symptoms Described by Caller (presentation)
 - a. As noted previously.

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4. Instructions Commonly Provided in addition to those noted previously:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) Keep patient warm (or cool, depending on the exposure being treated).
 - c. Do not give the patient anything to eat or drink except in cases of heat exhaustion (and if the patient is not vomiting or nauseous) when the patient is benefited by fluids. Never give anything to drink to the patient with a decreased level of consciousness.
 - d. Gather or list the patient's medications for the doctor.
 - e. Call back if the patient's condition changes before help arrives.
 - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
 - a. Pediatric complaints of this type are rare and often are presented to the

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EMD as frostbite or chilblains (itching inflammations of the skin due to exposure to moist cold) on exposed tissues such as the fingers, feet and ears. Treatment from the EMD should be limited to getting the patient out of the cold environment and attempting to rewarm the extremity by means other than rubbing the affected tissues.

- b. Heat related complaints usually are presented to the EMD as a "sick child" with flu like symptoms, dehydration from playing in the hot outdoors and slight heat exhaustion. Treatment includes removing the patient from the hot environment and providing fluids (if not nauseous or vomiting).
- c. Children are more slow to acclimate to hot or humid weather than adults and become dehydrated more rapidly. Children particularly at risk for environmental or exertion caused heat stroke are obese, febrile, have underlying pre-existing conditions like cystic fibrosis or diabetes, or recurrent vomiting and diarrhea. Infants and toddlers are particularly vulnerable to environmental heat stroke when overdressed, left in parked cars, or confined in a hot tub, sauna or any enclosed space.
- d. Children are seldom aware of the early signs of cold such as numbness, and may not be as compliant as adults in wearing appropriate covering. Pre-pubertal children with cold injuries can be at risk for growth plate injury and subsequent poor bone growth, especially of fingers and toes. When

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removing the child from the cold environment, make sure to advise changing wet clothes for dry coverings.

7 - Bleeding (Traumatic Incident Type)

1. Background:
 - a. Bleeding can be categorized as having two sites of origin, internal or external.
 - b. Vomiting blood, bleeding from the rectum or untimely vaginal bleeding should always be considered more serious than external bleeding.
 - c. External bleeding can be categorized as either being venous (dark red oozing blood) or arterial (bright red spurting blood). In either case the EMD must remember that ninety-five percent of all external bleeding can be controlled with direct pressure.
 - d. The caller may be frightened by what appears to be a volume of blood. Reassure the caller and calm them.
 - e. The EMD should not advise using pressure points or tourniquets. If the bystanders have already applied a tourniquet, leave it on the patient and allow the on-scene personnel to deal with it.
 - f. Because of the vascular nature of the face and scalp, lacerations to these areas may appear to be serious bleeds. Remember to focus on controlling the bleeding rather than estimating volume of blood loss.

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- g. Patients on blood-thinning drugs or those with hemophilia should be considered higher priority, life-threatening events and receive a higher level response.
 - h. The primary focus of the EMD should be on control of external bleeding, identifying symptoms indicating the onset of shock and airway maintenance of the unconscious patient.
- 2. Common Causes:
 - a. Self explanatory for external bleeding.
 - b. Internal bleeding can be caused by trauma, chronic or acute gastrointestinal ulcerative disease, gynecological/ obstetric maladies and ruptured abdominal aortic aneurysms.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Blood squirting out or pulsating out are common descriptions of external arterial bleeding.
 - b. Internal bleeding can be manifested as coffee ground-like emesis (vomit), blood in the emesis, dark tarry stools (indicating upper GI bleeds) or blood in the stools (indicating a lower GI bleed).
 - c. Anxiety, lowered levels of consciousness, agitation, chills, along with other classic symptoms of shock, are often reported in association with serious bleeds.

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4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway if level of consciousness is decreased.
 - b. Use direct pressure for all external lacerations. If the bleeding does not stop, the caller should apply more pressure to the bleeding site.
 - c. Treat for shock:
 - 1) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 2) Keep patient warm.
 - 3) DO NOT GIVE PATIENT FOOD OR DRINK.
 - d. For nose bleeds instruct the caller to pinch the nose between the thumb and finger and apply pressure in this way. Have the patient sit forward and attempt to spit the blood out (swallowing it will make the patient nauseous).
 - e. Call back if the patient's condition changes before help arrives.
 - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
 - a. Lacerations or hemorrhages in the head and facial areas in children may be serious bleeds because children have a smaller total circulating blood volume

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than adults and because these areas are very well supplied with blood and make up a larger portion of the body than in adults.

8 - Industrial Accidents (Traumatic Incident Type)

1. Background:
 - a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.
 - b. These cases should be handled as case specific, and if the chief complaint can be identified the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.
 - c. These calls are most often third party calls.
 - d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.
2. Common Causes:
 - a. Industrial traumatic incidents and entrapments in machinery
 - b. Common medical incident types such as abdominal pain, chest pain, diabetic problems, etc.

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- c. Reaction or exposure to chemicals or gases in the environment.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Case specific. Often all that is known is that an ambulance is needed at a particular location.
- 4. Instructions Commonly Provided:
 - a. Advise callers not to go into enclosed spaces to retrieve or treat the victim due to the possible presence of noxious or dangerous fumes.
 - b. The call often comes in from a security office or factory medical clinic. If the call comes from the security office of some location remote from the patient, it is very important to have them direct someone to meet the responders and guide them to the patient.
 - c. Case specific pre-arrival instructions should be given if the chief complaint is identified.
 - d. If the patient is trapped in machinery the machinery should be shut off.
 - e. Do not move the patient or splint the injuries.
 - f. Control of external bleeding with direct pressure and treat for shock if symptoms are present.
 - g. Obtain and relay pertinent information regarding previous

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medical history and cause of incident if possible.

- h. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) Keep patient warm.
 - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
 - i. Lock all pets (in this case guard dogs) away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations: - NONE

9 - Stabbing/Gunshot Victim (Traumatic Incident Type)

- 1. Background:
 - a. This protocol deals with penetrating trauma of any kind.
 - b. Penetrating trauma to the extremities is not as serious as penetrating trauma to the torso (or central core).

Penetrating traumas below the knees and elbows are not as serious as those above these areas of the extremities.
 - c. The safety of the scene is critical to determine and relay to the responding personnel.

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- d. The EMD should attempt to determine if there is a weapon at the scene or if the assailant is nearby.
 - e. The EMD should also determine when the incident occurred.
- 2. Common Causes:
 - a. Self-explanatory
- 3. Common Symptoms Described by Caller (presentation)
 - a. Callers reporting these incidents often have an emotional response to the situation. Proper calming techniques should be used.
 - b. Visible external bleeding.
 - c. Multiple victims.
 - d. Unconscious patient.
- 4. Instructions Commonly Provided:
 - a. Advise callers to remain safe. Do not approach scene if the assailant is presumed to be present.
 - b. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - c. Use direct pressure to control external bleeding.
 - d. Treat for shock:
 - 1) Control bleeding.

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- 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) Keep patient warm.
 - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
 - e. Do not pull out penetrating objects.
 - f. Do not disturb the scene or remove weapons.
 - g. Gather or list the patient's medication for the doctor.
 - h. Call back if the patient's condition changes before help arrives.
 - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. A child with a penetrating injury is highly likely to require surgery. Make sure that children in your system have access to a facility with staff (emergency department, surgeon, anesthesiologist, nursing, intensive care unit, laboratory, etc.) familiar with critically ill or injured children, as well as the means to get there in a timely fashion.

10 - Traumatic Injuries (Traumatic Incident Type)

- 1. Background:
 - a. This protocol is used for specific, identifiable injuries.

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- b. The focus of this protocol is to keep the patient still and to provide information so as to not cause any further injury to the patient.
- 2. Common Causes:
 - a. Fractures, dislocations, minor contusions and abrasions, etc.
 - b. Falls resulting in some specific trauma other than to the back.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Fractures, pain and swelling, immobility.
 - b. Back pain, numbness, tingling or immobility of the extremities. In this case a spinal injury should be assumed and spinal precautions taken.
 - c. External bleeding.
- 4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) Keep patient warm.

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- 4) DO NOT GIVE PATIENT FOOD OR DRINK.
 - c. Do not move the patient or splint any injuries.
 - d. Call back if the patient's condition changes before help arrives.
 - e. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. The alert injured child should be kept with a familiar adult if possible.
 - b. Injuries which look like sprains in children may involve the noncalcified portion of the bone called the "**growth plate.**" If the growth plate of a particular bone is injured, there may be a difference in final bone length or growth compared with the other side. Children who complain of hip, groin, or knee pain after a trivial injury may have a slippage of the bone through the growth plate of the femur (thigh bone). Further weight bearing may increase the slippage. Such children should be kept off their feet until evaluated even though they may be able to bear weight.

11 - Vehicle Related Injuries (Traumatic Incident Type)

- 1. Background:
 - a. This protocol is used in cases of injury caused by vehicles like automobile collisions, auto-pedestrian incidents,

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auto-motorcycle and bicycle collisions.

- b. Due to the third party nature of these calls information regarding how many patients, if there are any visible injuries, and the mechanisms of the accident are helpful to elicit from the caller and relay to the responding personnel.
 - c. Additional information of use includes if any one has been thrown from the vehicle or if there is chemical spill involved. If a chemical spill has occurred this information should be relayed, along with the type of chemical involved, to HAZMAT personnel.
 - d. Often motor vehicle collisions resulting in serious injury or death are treated as crime scenes. Check with your local regulations about what to do about these situations.
2. Common Causes:
- a. Self explanatory.
3. Common Symptoms Described by Caller (presentation)
- a. Multiple calls for the same collision. Callers may offer different accounts of the accident. Dispatch of appropriate resources should follow established in-house operating procedures.
 - b. Multiple patients, patients thrown, roll-overs and numerous other descriptions of the like.

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- c. Auto-pedestrian, auto-motorcycle and auto-bicycle collisions should always be considered high level emergencies.
- 4. Instructions Commonly Provided:
 - a. Treat for shock:
 - 1) Control bleeding.
 - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
 - 3) Keep patient warm.
 - 4) **DO NOT GIVE PATIENT FOOD OR DRINK.**
 - b. Do not move the patient(s) unless they are in danger.
 - c. Do not splint any injuries.
 - d. Ensure that the patient(s) have an open airway and monitor the patient's level of consciousness.
 - e. Call back if the patient's condition changes before help arrives.
 - f. Treat collision as potential crime scene until law enforcement arrives. Check with local regulations on how to deal with collision crime scenes.
 - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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5. Special Pediatric Considerations:

Vehicle-Child injuries will tend to be worse than Vehicle-Adult injuries for the following reasons:

- a. children tend to turn and face the on-coming car (resulting in frontal injuries) while adults tend to turn away (resulting in less life threatening back injuries) and
- b. children's height tends to put their vital organs at about the same level as the bumper of the approaching vehicle, making the resulting injuries that much worse.
- c. If multiple family members are involved in a vehicle crash, it is helpful to be able to transport the child with at least one familiar adult family member if possible.
- d. Policies for extrication of children in car seats should reflect the most recent NHTSA guidelines.

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Individual Chief Complaint Protocols. Following is a detailed review of the fourteen Individual Chief Complaint protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.

1 - Abdominal Pain (Individual Chief Complaint)

1. Background:
 - a. Most abdominal pain is non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.
 - b. Sometimes, patients experiencing cardiac events such as myocardial infarction (M.I.) will describe the pain as in their upper abdomen.
 - c. Women of childbearing age range may be having abdominal pain due to an ectopic pregnancy. This is often accompanied by signs and symptoms of shock from internal bleeding if the fallopian tube has ruptured.
 - d. Abdominal pain can be acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain or fainting (in females of child bearing age range).
 - e. The severity and duration of the pain often do not relate to the severity of the problem.

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- f. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems or if they are exhibiting signs of shock should be considered as experiencing abdominal aortic aneurysms and be dealt with as an emergency.

2. Common Causes:

- a. Most critical causes of abdominal pain include:
 - 1) myocardial infarction (symptoms include high abdominal pain (like indigestion);
 - 2) abdominal aortic aneurysm (symptoms include abdominal pain associated with back pain, sweating, fainting, symptoms of shock, dizziness) and
 - 3) ectopic pregnancy (lower abdominal pain; signs of shock and may or may not have missed a period).
- b. Moderately serious causes of abdominal pain include simple appendicitis, bowel obstruction (usually found in the elderly), perforated gastric ulcers, kidney stones and chronic illnesses involving the abdominal organs.
- c. Least critical causes of abdominal pain include gastritis, gastroenteritis, pelvic inflammatory disease, gastric ulcers, flu type maladies and gas.

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3. Common Symptoms Described by Caller (presentation)
 - a. Sharp stabbing pains, localized or covering the abdomen generally.
 - b. Abdominal distention or bloating.
 - c. Nausea, vomiting, diarrhea.
 - d. Pallor, sweating, fainting, light-headedness.
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
 - b. Allow patient to assume a comfortable position.
 - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume a position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - e. Gather or list the patient's medication for the doctor.

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- f. Call back if the patient's condition changes before help arrives.
 - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Abdominal pain in the pediatric patient is rarely a symptom of a critical event. It is worth considering three special situations that require rapid response.
 - 1) Parents will sometimes attribute persistent irritability or crying in their infant to abdominal pain and may contact EMS out of alarm or because they can no longer tolerate the crying. Irritable or colicky infants may be at increased risk of child abuse.
 - 2) Young boys with torsion (twisting) of the testicle may report only abdominal pain (either because the pain is referred to the abdomen or out of modesty). Failure to reverse the testicular torsion rapidly and restore the blood supply may result in the loss of reproductive function in that testicle.
 - 3) Because infants and children cannot always describe or communicate their symptoms, moderately serious causes of abdominal pain may not receive attention as quickly as they might in an adult, and may therefore be complicated by

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shock, peritonitis, and bowel necrosis (tissue death).

- b. Moderately serious causes of abdominal pain in children include appendicitis (often ruptured before diagnosed in young children), kidney stones or bowel obstruction like intussusception (telescoping of the bowel on itself) or volvulus (twisting of the bowel on itself). Vomiting that is green or yellow may contain bile and should be considered a sign of intestinal obstruction. If there has been considerable vomiting, the abdominal pain may be complicated by dehydration.
- c. Children may also complain of abdominal pain with strep throat, pneumonia, and simple gastroenteritis, constipation or gas.

2 - Allergies/Stings (Individual Chief Complaint)

- 1. Background:
 - a. An allergic reaction represents the body's adverse reaction to a foreign substance (antigen). In most cases allergic reactions are very minor.
 - b. Some individuals have severe allergies to one or more substances and can have a very severe reaction (anaphylactic shock).
 - c. The most important symptoms to identify in all reported cases of an allergic reaction are the existence of difficulty breathing or swallowing.

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- d. Anaphylactic shock is the most critical allergic reaction.
 - e. Anaphylactic shock is of sudden onset. Hives, rashes or itching that have been present for over an hour without difficulty breathing or swallowing are unlikely to progress into anaphylaxis.
- 2. Common Causes:
 - a. It is important to remember that a patient could be allergic to anything, therefore the EMD should evaluate critical symptoms and not try to determine the cause of the reaction.
 - b. Individuals are most commonly allergic to bee stings and other insect bites, seafood (particularly shellfish), nuts, berries and medication such as injected penicillin.
- 3. Common Symptoms Described by Caller (presentation)
 - a. In more severe cases the caller may report sudden collapse, difficulty breathing and/or swallowing, excessive salivation, unconsciousness and respiratory arrest.
 - b. Anaphylactic shock may have some or all of the symptoms mentioned in 3.a. These symptoms will occur within one hour of the exposure in most cases.
 - c. Minor symptoms may include a rash, swelling, hives, itching, abdominal pain and nausea. If these symptoms have been present for over one hour

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they are very unlikely to progress into anaphylaxis.

- d. *If the caller reports that the patient has a history of allergies and has had these reactions before, **believe them!*** They may indicate that the patient has been provided a self injectable medication, usually adrenaline or epinephrine. The EMD should tell the caller to have the patient "do what the doctor told you to do."

4. Instructions Commonly Provided:

- a. Monitor and maintain patient's airway, especially if patient is showing redness and/or swelling around the eyes, nose and mouth or having difficulty breathing or swallowing or has a decreasing level of consciousness.
- b. If the patient's condition seems to be worsening, keep the caller on the phone and be prepared to initiate telephone CPR.
- c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
- d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume a position of comfort.
 - 4) Calm and reassure patient.

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- 5) Keep the patient warm (maintain body temperature).
 - e. Unconscious patients should be placed on their side and their airways maintained. The EMD should constantly monitor the patient's airway and breathing status if the patient becomes unconscious.
 - f. The EMD should tell the caller to have the patient "do what the doctor told you to do".
 - g. Gather or list the patient's medications for the doctor.
 - h. Call back if the patient's condition changes before help arrives.
 - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Respiratory symptoms from allergic reactions can progress very rapidly in children to partial or complete airway obstruction and respiratory arrest, because their smaller airways can become obstructed with smaller degrees of swelling. Unsuspected allergic reaction to a sting or food item can be the cause of sudden unconsciousness in the child.

3 - Back Pain (Individual Chief Complaint)

- 1. Background:
 - a. The incidence of non-traumatic back pain is very common and in most

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cases represents minor problems. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.

- b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will describe the pain as radiating through to their back.
- c. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems or if they are exhibiting signs of shock should be considered to be experiencing abdominal aortic aneurysms and be treated as an emergency.
- d. Back pain may be described as either acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain (in patients over 35) or fainting (in patients over 50).
- e. The severity of the pain and the duration of the pain often does not relate to the severity of the problem.

2. Common Causes:

- a. Most critical causes of back pain include falls, abdominal aortic aneurysms, thoracic dissections, neurologic problems and M.I.
- b. Moderately serious causes of back pain include kidney stones, rib and

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spinal fractures (if traumatically induced).

- c. Least critical causes of back pain include chronic low back pain, vertebral disc disease, kidney infections and sprained backs.
3. Common Symptoms Described by Caller (presentation)
- a. Sharp stabbing pains, localized or covering the abdomen generally.
 - b. Abdominal distention or bloating.
 - c. Nausea, vomiting, diarrhea.
 - d. Pallor, sweating, fainting light-headedness.
 - e. Numbness or tingling in the extremities.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.
 - b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - c. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.

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- 3) Let patient assume position of comfort (IN CASES OF TRAUMATIC BACK PAIN, THE PATIENT SHOULD NOT BE MOVED);
 - 4) Calm and reassure patient and
 - 5) Keep the patient warm (maintain body temperature).
- d. Gather or list the patient's medications for the doctor.
 - e. Call back if the patient's condition changes before help arrives.
 - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations: - NONE

4 - Breathing Problems (Individual Chief Complaint)

1. Background:
 - a. Breathing problems are usually more severe in the very young and the very old.
 - b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will complain of difficulty breathing.
 - c. Breathing problems should always be considered a high level medical emergency.
 - d. The previous medical history should be relayed to the responding units.

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NOTE: People who call you reporting breathing problems represent one of the most difficult calls you will have to deal with. What may be one person's distress could be another's chronic breathing problem (that they have to deal with daily).

What's most important is that you try to determine what has changed about the person's breathing that prompted the caller to call for help.

2. Common Causes:
 - a. Primary breathing problems having to do with the lungs (lower respiratory system) include asthma, pneumonia, drug overdose, emphysema, pulmonary embolus, congestive heart failure and acute pulmonary edema.
 - b. Secondary breathing problems having to do with the upper airway include croup, choking, epiglottitis and partial airway obstructions.
 - c. Tertiary breathing problems caused by an unrelated illness or incident include hyperventilation syndrome, stroke (CVA), diabetic ketoacidosis, seizures, cardiac arrest, and in some cases severe facial trauma.
3. Common Symptoms Described by Caller (presentation)
 - a. Difficulty breathing, wheezing, shortness of breath, noisy breathing, "fighting for air," gasping for air, etc.

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- b. Anxiety, change in skin color, impending feeling of "impending doom."
 - c. Excessive coughing
- 4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.
 - b. Calm and reassure the patient. Tell the patient to relax and slow their breathing, blow the air out and encourage the patient to breath with you.
 - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort (usually sitting-up).
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - e. Gather or list the patient's medication for the doctor.
 - f. Call back if the patient's condition changes before help arrives.

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- g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. *Breathing problems are the most common pediatric medical problem encountered by the EMD and can be critical. Air passages are smaller than in the adult, and therefore problems will be more acute. Airway obstruction happens more commonly in infants and children than in adults. Infants may not learn to breath through their mouths until as late as nine months of age, therefore, simple nasal congestion of a cold is capable of causing significant respiratory distress in the infant. In addition to the signs and symptoms listed above, consider the presence of head bobbing, grunting (a sound made in expiration with each breath) flaring of the nostrils and retracting of the skin with each breath at the clavicles, ribs and diaphragm as signs of advancing respiratory distress.*
 - b. Although the incidence of epiglottitis has marked declined since the use of a vaccine to prevent the usual bacteria responsible, it remains a true respiratory emergency. The hallmark presenting sign is usually marked throat pain to the point of being unable to swallow (drooling), fever and rapidly progressing respiratory distress in a febrile child who assumes a "tripod" sitting position with his/her neck flexed and head extended (the "sniffing" position). The child with suspected epiglottitis, and all children with suspected upper airway obstruction, should be allowed to

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assume the position of comfort, kept calm, not separated from his or her parent and brought to medical attention as soon as possible.

5 - Chest Pain (Individual Chief Complaint)

1. Background:
 - a. Chest pain often is caused by a blockage of one or more of the coronary arteries. This blocks the oxygen delivery to a portion of the heart muscle and causes chest pain.
 - b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will describe the pain as in their upper abdomen.
 - c. The average age of the onset of symptomatic cardiac disease is 35 years old for males and 40 years for females. Any male patient 35 or older or female 40 or older complaining of abdominal pain should be considered a possible cardiac event.
 - d. Any patient over the age of 35 complaining of chest pain should be considered a cardiac event.
 - e. Patients with prior histories of cardiac problems may represent a higher critical problem.
2. Common Causes:
 - a. Most critical causes of chest pain include heart attack (myocardial infarction or M.I.) and a dissecting

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thoracic aortic dissection (aneurism in the chest).

- b. Potentially critical problems causing chest pain include pulmonary embolisms (blood clot in the lungs) and pericarditis (infection of the tissues surrounding the heart).
 - c. Least critical causes of chest pain include pleurisy, pneumonia, esophagitis, hiatal hernias, viral illnesses, rib injuries, muscle strains and "shingles."
3. Common Symptoms Described by Caller (presentation)
- a. Chest pain that is related to a problem with the respiratory system or lungs is usually described as a sharp stabbing pain that increases or decreases with respirations.
 - b. Chest pain associated with a heart attack or M.I. is often described as a dull crushing pain or a pressure sensation that may radiate to the neck, jaw and/or left arm (similar to angina).

The patient often experiences a change in skin color (ashen gray or pale) and they often experience severe sweating (diaphoresis). The patient may be nauseous, vomiting and have difficulty breathing. They often are very anxious and have a "feeling of impending doom."

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4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.
 - b. Allow patient to assume a comfortable position, usually sitting up to aid in respirations.
 - c. The patient may report that they have been given medication to take when they experience chest pain. If they ask the EMD what they should do, the EMD should advise the caller to have the patient do what their doctor told them to do. If the patient has taken any medication, this information should be relayed to the responding units.
 - d. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - e. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - f. Have first-party callers stay on the phone, or if the patient has an altered level of consciousness, or if callers state that they feel as if they "are going to die."

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- g. Gather or list the patient's medications for the doctor.
 - h. Call back if the patient's condition changes before help arrives.
 - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Chest pain is a common symptom in young adolescents, but unusual in younger children and when present is extremely unlikely to be due to myocardial infarction. Spontaneous pneumothorax, air leak from an acute asthmatic attack, and pulmonary embolus do occur in the pediatric population.
 - b. Because it is not commonly recognized, pulmonary embolus has a much higher case fatality rate in children than in adults. The child with chest pain, fast heart and breathing rate and any of the following can be considered at risk for pulmonary embolus:
 - 1) obesity
 - 2) birth control pills
 - 3) dehydration
 - 4) nephrotic syndrome
 - 5) family history of clotting problems
 - 6) recent long bone fracture and

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- 7) prolonged bedrest or inactivity.

6 - Convulsion/Seizure (Individual Chief Complaint)

1. Background:
 - a. A convulsion or seizure is believed to be caused by a misfiring of nerve cells in the brain either as a result of injury, lack of oxygen or disease.
 - b. Patients going into cardiac arrest occasionally will have a brief, anoxic seizure due to the brain being robbed of oxygen. It is often an initial sign of cardiac arrest. Seizure patients over 35 whose breathing cannot be verified should be considered cardiac arrests until breathing can be confirmed.
 - c. There are many types of seizures including grand mal, petit mal, psychomotor, focal motor and jacksonian. All present themselves in a different fashion. The most common by far is the grand mal.
 - d. Ninety-five percent of all seizure patients with an unknown history have been diagnosed with epilepsy.
 - e. Seizures associated with fever (febrile seizures) in children under 6 are common. They are usually short in duration (less than 15 minutes), self-limited, and rarely cause respiratory or cardiac compromise. It is unusual for febrile seizures to require medication in the field and they do not indicate that the child has epilepsy.

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- f. CPR should not be performed on a seizure patient unless the pulse is not present.
 - g. Once the seizure has stopped, maintaining an open and clear airway is the most important thing the EMD can do for the seizure patient.
 - h. Most seizures last approximately 45-60 seconds. Anoxic seizures resulting from cardiac arrest are usually much shorter. After the seizure stops, the patient is normally unconscious and in what is referred to as a "post-ictal" state. This condition usually last less than 15 minutes and may be longer for some patients. Once the seizure has ended, the patient experiences excessive salivation and may have a great deal of oral secretions. This is the time when airway maintenance is crucial.
 - i. Patients reported to be having continuous or multiple seizures represent a much higher medical emergency.
 - j. Some epileptic patients can tell when they are going to have a seizure and may have someone call for help before the seizure starts. This is called an "aura."
2. Common Causes:
- a. Epilepsy, trauma to the head, brain or intra-cranial tumors, meningitis, cardiac arrest, anoxia (lack of oxygen), fever, and many other causes. Anything that disrupts the

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normal functioning of the brain has the potential to cause a seizure.

3. Common Symptoms Described by Caller: (presentation)
 - a. Sudden stiffening and jerking movements over the entire body. The caller may describe the patient as arching their back and perhaps crying out just before the seizure.
 - b. Bluish or discoloration of the skin during seizure.
 - c. Snoring or gurgling after the seizure is over. This indicates a possible compromise in the airway.
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway after the seizure. Gently roll the patient on their side and clear out the mouth to clear the airway.
 - b. Do not attempt to hold the patient down during the seizure.
 - c. Do not perform CPR while the patient is jerking.
 - d. Do not attempt to place anything in the mouth while patient is seizing to prevent them from biting or "swallowing" the tongue.
 - e. Do not let the patient get up or wander around after the seizure, as they may not be fully conscious.

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- f. Move dangerous objects away from the patient during the seizure to prevent injury.
 - g. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - h. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - i. Gather or list the patient's medications for the doctor.
 - j. Call back if the patient's condition changes before help arrives.
 - k. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Seizures in children are common and a common reason for calling EMS. Although many childhood seizures will be found to be simple febrile seizures, epilepsy is common in childhood.
 - b. Status epilepticus is a series of consecutive seizures or continuous seizure activity in which the child does

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not regain consciousness between seizures.

- c. Prolonged seizures can cause brain damage, especially if associated with either low blood and brain levels of glucose and oxygen.
- d. Seizure activity may be subtle, and can look like limpness, eye rolling or blinking, chewing or mouthing motions, cycling movements of the legs, as well as the more easily identified tonic-clonic shaking of extremities. It is helpful for the bystander and the EMS providers to note any asymmetry of movement, including eye deviation.

7 - Diabetic Problems (Individual Chief Complaint)

- 1. Background:
 - a. Diabetes is a condition that prevents the body from correctly metabolizing sugar into energy. The body lacks the ability to produce correct amounts of insulin, the hormone that aids in sugar metabolism. This requires the diabetic patient, in many cases, to have to take insulin.
 - b. When a diabetic fails to take their insulin they will have a gradual rise in their blood sugar levels. This is a slow onset and results in diabetic ketoacidosis. Ketoacids are a toxic byproduct of this. The body tries to eliminate these toxins through the respiratory system, and the patient may be described as breathing very deeply. The ketoacids can be

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detected on the patients breath as a fruity or sweet smell. The patient may become very ill with flu like symptoms. If this goes unchecked the patient may progress into diabetic coma, a state of unconsciousness caused by extremely high blood sugar levels. Patients often seek medical attention prior to this occurring.

- c. When an insulin dependent diabetic takes too much insulin or takes their regular dose and engages in higher levels of activity or fails to eat, the insulin depletes the body's available blood sugar, and the patient experiences a rapid decrease in consciousness. This condition is known as insulin shock. It has a rapid onset with the level of consciousness decreasing until the patient is unconscious. This is by far the most common diabetic emergency faced by EMS.
 - d. Due to the high reliability of the family's reporting of an insulin reaction or diabetic problem, this protocol should be accessed if the caller indicates that it is a diabetic emergency.
 - e. The main thing for the EMD to be concerned with is maintaining the patients airway if their level of consciousness is decreased.
 - f. The EMD should attempt to obtain and relay information regarding the history of the patient.
2. Common Causes:
- a. As noted previously.

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3. Common Symptoms Described by Caller (presentation)
 - a. As noted previously.
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient's level of consciousness is decreased or if they are unconscious.
 - b. Allow patient to assume a comfortable position.
 - c. Administration of sugar or soda-pop to a diabetic patient is left up to local medical control. This is because doing so alters the assessment of the patient by responding personnel and may not have any noticeable effect on the patient's level of consciousness. ***You need to check your local regulations on the administration of sugar to diabetics.***
 - d. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - e. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).

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- f. Gather or list the patient's medications for the doctor.
 - g. Call back if the patient's condition changes before help arrives.
 - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Some children with diabetes have been provided with glucagon, a medication which can be given as a shot to raise blood sugar if the child becomes unconscious or begins seizing with insulin shock. If the caller is able to administer glucagon during such episodes, the EMD should advise that it be given "as your doctor has directed you."

8 - Headache (Individual Chief Complaint)

- 1. Background:
 - a. Since the brain is the organ of concern in patients reporting headache the primary focus of the EMD should be changes in the patient's alertness (level of consciousness) and speech and motor problems. Both indicate more serious causes.
 - b. Sudden severe onset of pain may suggest a more serious underlying cause as well (subarachnoid and subdural hemorrhage).

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- c. Most other headaches such as migraine, tension, sinus etc. are less serious in nature. EMS is not commonly called for these complaints.
- 2. Common Causes:
 - a. Most serious causes of headaches include: meningitis; subdural hematomas and subarachnoid hemorrhage. These are usually reported as having started as a sudden severe onset of pain and are often associated with speech and/or motor problems.
 - b. Moderately serious causes include migraines, cluster and other vascular headaches.
 - c. Minor causes of headaches include tension, sinus headaches (the common headache) and intracerebral bleeding due to hypertension.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Sudden severe onset of pain associated with speech or motor problems should be considered more serious than a simple complaint of headache without any other symptoms.
 - b. History of migraines. The patient may be nauseated and vomiting and be incapacitated with pain.

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4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
 - b. Allow patient to assume a comfortable position.
 - c. Do not give the patient anything to eat or drink.
 - d. Gather or list the patient's medications for the doctor.
 - e. Call back if the patient's condition changes before help arrives.
 - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
 - a. Meningitis is more common in children than adults and is potentially contagious. If the symptoms described include fever, respiratory precautions should be advised for the EMS team dispatched.

9 - Heart Problems (Individual Chief Complaint)

1. Background:
 - a. This complaint represents a diagnosis rather than a chief complaint. The EMD must concentrate on looking for symptoms from the caller rather than a presumed diagnosis.

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- b. The EMD should attempt to determine if chest pain is present and then proceed to the appropriate protocol for that specific chief complaint.
 - c. The EMD should attempt to gain information regarding previous medical or cardiac history. The patient may have an implanted defibrillator or pacemaker that has malfunctioned. These complaints may not always be associated with classic cardiac symptoms.
 - d. If, after all questioning, the patient is without symptoms, the EMD may attempt to have the caller get a pulse rate on the patient. Many heart problems are manifested by a rapid heart rate. An adult with a resting heart rate of over 140 may be having a heart problem. Slow heart rates can cause decreased consciousness. Any heart rate less than 40 is also cause for concern.
 - e. Congestive heart failure may present itself as breathing difficulty, weakness, sweating and the caller may report to you that the patient has been on typical heart medications (like diuretics).
2. Common Causes:
- a. Electrical malfunctions of the heart resulting in irregular or rapid heart rates.
 - b. Acute myocardial infarction.
 - c. Malfunctioning internal defibrillators.

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3. Common Symptoms Described by Caller (presentation)
 - a. Firing internal defibrillator.
 - b. Chest pain, difficulty breathing and other cardiac related symptoms.
 - c. Irregular or rapid heart rate. Often described as "palpitations".
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
 - b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - c. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - d. Gather or list the patient's medications for the doctor.
 - e. Call back if the patient's condition changes before help arrives.

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- f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Common causes of pediatric heart problems include congenital abnormalities of the heart that can cause congestive heart failure or cyanosis and rhythm disturbances, particularly very fast heart rates above 200. Symptoms in the infant and child include those mentioned, as well as poor feeding and change in color or activity level.

10 - Ingestions/Poisons/O.D. (Individual Chief Complaint)

- 1. Background:
 - a. An overdose, as defined for dispatch, is a purposeful and intentional ingestion involving any patient over the age of 12 years old. The patient also has a motive for their actions.
 - b. An accidental ingestion is defined as an accidental, or unintentional, intake by a child under the age of 12.
 - c. A poisoning is defined as an accidental intake of a toxic substance, usually by a child under the age of 12.
 - d. All overdose patients should be considered a possible danger to themselves and others. The safety of the scene must be addressed during questioning.

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- e. Access to the local poison control intervention line should be established and accessed, when appropriate, according to local policies and procedures.
- 2. Common Causes:
 - a. Accidental ingestions at home are common in children and the elderly (confusion with medication).
 - b. Overdoses are related to depression, either as a gesture for help or as a serious suicide attempt.
 - c. Poisonings occurring in the home usually involve a small child who has ingested a family member's medications or some toxic/caustic substance.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Normally described as noted previously.
- 4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - c. Treat for shock:
 - 1) Keep airway clear.

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- 2) Let patient assume position of comfort.
 - 3) Calm and reassure patient.
 - 4) Keep the patient warm (maintain body temperature).
 - d. In cases of poisoning, do not induce vomiting. If caustic ingestion, have patient drink water or milk until help arrives (CHECK WITH POISON CONTROL CONSULTANTS FIRST, UNLESS OTHERWISE INDICATED IN YOUR EMDPRS).
 - e. Do not give the patient anything to eat or drink except in cases of a caustic ingestion of an acid or lye.
 - f. Protect the patient from further injury to themselves if safe to do so.
 - g. Contact poison control if ingestion is accidental and the patient is free of symptoms.
 - h. Call back if the patient's condition changes before help arrives or if the patient leaves the scene.
 - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Poisoning is the most common cause of non-fatal injury in the home. The most common serious poisonings in children involve caustics, hydrocarbon/petroleum, iron (medicinal),

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antidepressant and cardiac medications.

11 - Psychiatric/Behavioral (Individual Chief Complaint)

1. Background:
 - a. Psychiatric or behavioral problems can relate to a diagnosed problem such as schizophrenia, mania, depression, etc.
 - b. Underlying medical problems often are mistaken for behavioral problems. In diabetics or epileptics, their lowered level of consciousness during or after manifestation may be mistaken for a psychiatric or behavioral problem. Attempt to determine medical history.
 - c. All patients exhibiting psychiatric/behavioral problems should be considered a potential danger to themselves and others.
 - d. It should be determined if the patient has a weapon.
 - e. If the patient has attempted suicide, the specific EMDPRS chief complaint protocol should be accessed in the EMDPRS and followed to treat the reported situation.
 - f. The EMD may want to check if resources exist for crisis intervention.
2. Common Causes:
 - a. As described previously.

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3. Common Symptoms Described by Caller (presentation)
 - a. Patient exhibiting abnormal or unusual behavior.
 - b. Patient threatening violence.
 - c. Patient threatening suicide.
 - d. Depression.
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. Attempt to protect the patient from themselves.
 - c. Attempt to lay the patient down and calm him/her.
 - d. Do not give the patient anything to eat or drink.
 - e. Gather or list the patient's medication for the doctor.
 - f. Call back if the patient's condition changes or if the patient leaves the scene before help arrives.
 - g. If available, Crisis Intervention should be contacted. Check with your agency about local regulations on using Crisis Intervention.
 - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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5. Special Pediatric Considerations:
 - a. In children under 8, many episodes of altered behavior of possible psychiatric origin will in fact be related to underlying toxic exposure, neurologic event or infection, or child abuse.

12 - Sick Person (Individual Chief Complaint)

1. Background:
 - a. A sick person is a patient who has an undefinable chief complaint, uncategorizable symptoms or when the caller provides specific information on a previous diagnosis.
 - b. This card is accessed when a second party caller reports a diagnosis or some other term to describe what they believe may be the problem.
 - c. The function of this protocol is to assist the EMD in identifying the chief complaint or some other significant symptom or medical history, rather than rely on the caller's presumed diagnosis.
2. Common Causes:
 - a. Any illness or malady could potentially be handled on this protocol.
3. Common Symptoms Described by Caller: (presentation)
 - a. Callers often will relate a previous diagnosis.

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- b. Nausea, vomiting, weakness, dehydration.
 - c. These patients have the potential to be very ill, as in the case of a terminally ill patient. Calm and reassure the caller who may have had an emotional response to the situation.
 - d. If a specific chief complaint is identified the EMD should use the EMDPRS protocol that suits the patient's chief complaint.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - c. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - d. Gather or list the patient's medications for the doctor.

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- e. Call back if the patient's condition changes before help arrives.
 - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Children with a pre-existing diagnosis are much more likely than healthy children to have a medical event requiring EMS. Some agencies maintain a roster of children in the community with special or pre-existing health care needs whose safety network relies upon a knowledgeable EMS system familiar with the child's condition, usual complications, emergency treatment, and usual site of emergency and chronic care. Parents and caregivers of such children have frequently been equipped with such information and can assist EMS in such situations.
 - b. It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific may be the signs of illness; irritability, crying, vomiting, fever, and lethargy are symptoms that may accompany a wide range of pediatric conditions, many trivial, some life-threatening. Behind the complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, intussusception, meningitis, child abuse, or a simple ear infection. Behind the complaint, "my baby had a spell where she was blue, pale, not breathing, unresponsive..." may be

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something as simple as regurgitation or as complex as seizure, heart rhythm disturbance, apnea or sepsis. Because the symptoms are nonspecific, even the experienced pediatric provider will sometimes have difficulty discriminating between these conditions in person, let alone over the phone. Over-triage is an acceptable response to this ambiguity.

13 - Stroke/CVA (Individual Chief Complaint)

1. Background:
 - a. A stroke, or cerebral vascular accident (CVA) denotes a situation where the blood flow has been interrupted to a portion of the brain due to a blood clot, hypertension-induced intracerebral hemorrhage or a ruptured aneurysm.
 - b. Although dramatic, the CVA patient usually is not considered a high level medical emergency. The event is fixed, therefore the treatment is rehabilitative.
2. Common Causes:
 - a. Blockage of a cerebral artery.
 - b. Ruptured aneurysm.
 - c. Dissecting aneurysm.
 - d. Intracerebral hemorrhage.

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3. Common Symptoms Described by Caller (presentation)
 - a. Speech and motor problems. Motor functions diminish on one side of the body.
 - b. Numbness and tingling may be present.
 - c. History of stroke.
 - d. Altered level of consciousness (lower levels of consciousness indicate the event is more severe).
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. Allow patient to assume a comfortable position.
 - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).

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- e. Gather or list the patient's medications for the doctor.
 - f. Call back if the patient's condition changes before help arrives.
 - g. The patient may have difficulty walking, do not let them wander around (they could injure themselves further).
 - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Symptoms suggestive of a stroke are not common in healthy children but can rarely occur for all the same reasons as in an adult, or because of a complicated migraine. Children with underlying medical conditions like leukemia, renal failure, hemophilia, or metabolic disease are at risk for CVAs. Whoever is attending the child must pay particular attention to the airway in the child.

14 - Unknown/Man Down (Individual Chief Complaint)

- 1. Background:
 - a. These calls are usually third party calls reporting an unknown situation or a man down and appearing to need assistance.
 - b. The third party nature of these cases makes it difficult to get valid, comprehensive information from the caller about the patient's condition.

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- c. The questions should help to determine if the patient is alive or not. The third party caller can report if the patient was sitting or standing or lying down and if the patient was seen talking or moving at all to help clarify this question.
- 2. Common Causes:
 - a. Intoxication, trauma, underlying medical complaints.
 - b. Virtually anything causing the patient to fall and not get up would be handled with this protocol if the caller was a third party (away from the scene and patient).
- 3. Common Symptoms Described by Caller (presentation)
 - a. Man down in the park etc., caller not near the patient and little information available.
 - b. Medical assist alarms.
- 4. Instructions Commonly Provided:
 - a. Return to the patient and establish consciousness, airway and breathing. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. Ask the caller if there is a phone or person closer to the patient that could be used so you can get better information.

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- c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - e. Watch for and guide the ambulance to the patient.
 - f. Call back if the patient's condition changes before help arrives.
 - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Unsuspected allergic reaction should be considered.

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Time/Life-Critical Events. Following is a detailed review of the seven Time/Life Critical Events. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.

1 - CO/Inhalation/HAZMAT (Time/Life-Critical Event)

1. Background:
 - a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.
 - b. These cases should be handled as case specific, and if the chief complaint can be identified the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.
 - c. These calls are most often third-party calls.
 - d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.
 - e. CO is a colorless odorless gas that is the result of incomplete combustion.

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- f. Carbon monoxide (CO) poisoning is the most common hazardous material/inhalation complaint encountered in EMS.
- g. CO binds with the hemoglobin molecule in the blood stream and displaces oxygen and carbon dioxide. This makes this complaint very urgent in that the patient is possibly suffocating at the cellular level. More severe cases of CO poisoning may require hyperbaric treatment in a decompression chamber in order to provide sufficient energy to break these chemical bonds.
- h. Patients can be found in any stage of intoxication. One of the most telling symptoms is the level of consciousness. If the patient is unconscious or has a decreased level of consciousness, they should be assumed to have a severe exposure and immediate transport should be advised.
- i. Other inhalation and HAZMAT situations present should also be assumed to be high level emergencies. The EMD should determine the source and type of exposure and advise the caller to remain safe and away from the hazardous environment. If information regarding the type and source of the exposure is obtained, it must be relayed to the responding crews.

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2. Common Causes:
 - a. CO poisoning resulting from smoke inhalation, poorly ventilated heating systems, industrial accidents and automobile exhaust systems.
 - b. Most other HAZMAT incidents occur in industrial settings or on the highway, secondary to motor vehicle accidents involving chemical spills. The EMD should be aware of local HAZMAT policies in these cases.
3. Common Symptoms Described by Caller (presentation)
 - a. Headache, nausea and altered level of consciousness are common CO poisoning complaints
 - b. In cases of other inhalations and HAZMAT situations, callers may report respiratory difficulty, burning of the eyes, superficial chemical burns, nausea, vomiting and decreased levels of consciousness.
 - c. Multiple victims are commonly present if in an industrial or public location.
4. Instructions Commonly Provided:
 - a. Remove patient from hazardous environment **if safe to do so.**
 - b. Monitor and maintain patient's airway, especially if patient is described with a decreased level of consciousness or is unconscious.

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- c. Irrigate chemical exposures to the skin with water if burns are present.
- d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.
- e. Be aware that the patient may have difficulty walking. Discourage ambulation (Don't let them walk around).
- f. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
- g. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
- h. Have someone guide the responding personnel to the patient(s) if in an industrial setting.
- i. Call back if the patient's condition changes before help arrives.

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- j. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. CO/inhalation events occur in pediatric aged patients usually in a situation with poorly ventilated home heating, prolonged car travel, or house fires. CO poisoning has been implicated in crib death or Sudden Infant Death Syndrome (SIDS). If the exposure involves multiple victims, there may be variable levels of exposure and symptoms. It is helpful to have specific plans or protocols for the transfer of children to hyperbaric treatment facilities.
 - b. HAZMAT situations involving children are uncommon, but may involve multiple children if located at a school or day care facility. Any HAZMAT disaster planning should have provisions specific to the management of single or multiple affected children.

2 - Cardiac Arrest (Time/Life-Critical Event)

- 1. Background:
 - a. Cardiac arrest occurs when the heart ceases to produce a productive rhythm, hence no blood is circulated. Respiratory arrest (stopped breathing) usually accompanies cardiac arrests. In this state, patients are defined as "clinically dead."

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- b. Patients in cardiac arrest who have CPR initiated early and continued throughout the response have a better chance for survival.
 - c. All patients who are reported to be unconscious and not breathing or who's breathing cannot be verified by a second party caller should be assumed to be in cardiac arrest.
 - d. A system of consistent and uniform questioning should be used on all calls to determine if the patient is conscious and breathing and to determine cardiac arrest as soon as possible.
 - e. Be certain to determine pulselessness during CPR instruction sequence to avoid chest compressions on patients who are in respiratory arrest only.
 - f. Always determine if the patient has choked on something prior to doing CPR. They may need choking instructions to clear the upper airway obstruction.
2. Common Causes:
- a. Ventricular fibrillation, acute myocardial infarction, trauma, chronic illness, electrocution, suffocation, drowning, choking.
3. Common Symptoms Described by Caller (presentation)
- a. Patient unconscious and not breathing, unresponsive.
 - b. Patient's color has changed.

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- c. Patient described as "making funny or strange noises" (a term used by callers to describe agonal or dying respirations).
 - 1) Agonal respirations are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," "gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," or "every once in a while."
- 4. Instructions Commonly Provided:
 - a. Follow CPR or Choking instructions found in EMDPRS to provide telephone instructions to the caller.
 - b. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Unlike adults, children develop cardiac arrest from a multitude of different causes, 10% of which or less having to do with primary heart problems. You will not commonly deal with pediatric cardiac arrest. When you are called upon to do so, it is helpful to realize that some children presumed to be in full cardiac arrest have respiratory arrest only and that recovery from respiratory arrest can be excellent if effective airway support and rescue breathing

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are begun as soon as possible. It can be very difficult to feel a pulse in infants or small children and there should be as little delay as possible in providing airway support and rescue breathing.

- b. The child in full cardiac arrest has most commonly been suffering some period of oxygen deprivation and/or circulatory failure and the outcome of resuscitative efforts is usually very poor. Unlike in adults, timely defibrillation will not often change the outcome of pediatric cardiac arrest. Moreover, basic life support units equipped with semiautomatic defibrillators will usually have weight or age limitations on the use of the equipment. Critical interventions in a pediatric cardiac arrest are airway and breathing management and circulatory support. Units responding to a pediatric cardiac arrest ideally should be skilled in advanced airway management and vascular or intraosseous access. Recommendations for instructions for bystander CPR for children are different than for adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.

3 - Choking (Time/Life-Critical Event)

- 1. Background:
 - a. Upper airway obstruction constitutes a life critical emergency requiring immediate intervention by the EMD.

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- b. Often the only chance for survival of the patient is for the EMD to assist via telephone choking instructions.
- c. Patients with a total upper airway obstruction are not able to breathe, speak or cough.
- d. Unless the airway is cleared of the blockage the patient will become unconscious within 1-2 minutes and irreversible brain damage and death will occur in 4-6 minutes.
- e. Choking instructions given over the telephone by trained EMDs are one of the most common life-saving interventions undertaken by the EMD.
- f. A patient who has gagged or has a partial airway obstruction should not have choking instructions provided. If the patient is able to make any sounds through the airway, the patient should not be agitated. If the patient has a cough that seems to be addressing the problem, don't intervene. If the patient appears to be deteriorating, then something should be done. Signs of a partial obstruction are high-pitched wheezing or whistling sounds.

2. Common Causes:

- a. Choking on food and small toys (in children) are the most common causes of upper airway obstructions.
- b. Some situations such as asthma, epiglottitis and severe allergic reactions may appear to be choking episodes.

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3. Common Symptoms Described by Caller (presentation)
 - a. The patient may have grabbed his/her throat to signal a choking episode.
 - b. The patient's color is blue or has changed from it's normal color.
 - c. The patient may be unconscious.
 - d. The patient may be reported to have been eating.
4. Instructions Commonly Provided:
 - a. Follow Choking instruction sequence found in EMDPRS to provide telephone instructions to the caller.
 - b. Be sure to avoid performing chest compressions by ascertaining status of pulse during the choking treatment instructions.
 - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).

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- e. Do not attempt choking interventions on patients who do not have a complete airway obstruction (cannot talk, breathe or speak).
 - f. Gather or list the patient's medications for the doctor.
 - g. Keep caller on the phone until help arrives and takes over from the bystanders.
 - h. Repeat choking sequence until help arrives or until the airway is cleared.
 - i. Call back if the patient's condition changes before help arrives.
 - j. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Choking on foreign bodies is a common pediatric problem and one for which pediatricians frequently give safety advice to parents. Small toy parts, latex balloons, mercury batteries and solid food pieces are common causes.
 - b. The child who has recovered from a significant choking episode should be evaluated for the possibility of a foreign body that has been aspirated into the lower airway (gone into the body of the lung).
 - c. Foreign bodies in the esophagus of young children can sometimes cause choking and respiratory compromise.

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- d. Recommendations for instructions for management of choking are different in infants, children and adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.

4 - Drowning (possible) (Time/Life-Critical Event)

- 1. Background:
 - a. This protocol is intended to be used in those cases of near-drowning incidents ("drowning" is death due to immersion, whereas "near-drowning" is survival from such an event).
 - b. If the patient is in cardiac arrest, the EMD should identify the unconsciousness and not breathing status and proceed directly to instructions for CPR.
 - c. In cases of shallow water diving incidents, the presence of a cervical spinal injury must always be assumed as a possibility. Care should be taken to not move the patient unless absolutely necessary.
 - d. In cases of near-drowning, the patient is often found in respiratory arrest only and not in cardiac arrest. This means that frequently, if the patient is discovered quickly, the patient needs only ventilatory support. The EMD must carefully check for pulselessness prior to initiating CPR.
 - e. Resuscitation efforts should be undertaken with all victims of near-drowning. No one knows how long a

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patient can be under water and be successfully resuscitated. There have been documented saves of victims that have been underwater for over an hour.

- f. A theory explains that this phenomenon is related to the mammalian diving reflex. Most aquatic mammals are able to exist for long periods of time underwater on lowered levels of oxygen. It is believed that the younger the patient, the longer they can be submerged due to the holdover vestige of the patient's pre-birth disposition where they lived in an aquatic environment on lowered levels of oxygen. Combined with the cold temperature of the water in many cases, the salvageability of the patient is enhanced.

2. Common Causes:

- a. Bathtub drownings, pools, ponds and canals (particularly with children).
- b. Shallow water diving incidents resulting in spinal cord injury.

3. Common Symptoms Described by Caller (presentation)

- a. Coughing, difficulty breathing, lowered levels of consciousness, vomiting and change in skin color.
- b. With possible spinal cord injury the patient may also be experiencing numbness, tingling and immobility in the extremities.

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4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
 - b. Allow patient to assume a comfortable position. Do not move the patient if a spinal cord injury is suspected due to the mechanism of injury and in cases of shallow water diving incidents.
 - c. If the patient is in the water and breathing, support the patient there until help arrives to remove the patient from the water.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - e. Call back if the patient's condition changes before help arrives.
 - f. If patient is found to be unconscious and not breathing proceed immediately to CPR treatment sequence and initiate CPR.

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- g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

- a. Drowning is a major cause of unintentional death in young children. Near-drowning, or submersion injury followed by survival, is one critical pediatric emergencies for which you may receive calls for help. For these calls, field management is vital. The real window of opportunity for medical intervention is in the hands of the bystander, EMD, and EMS responders in the field:
- b. The injury in near drowning is global oxygen deficit. The goal of treatment is to reverse that deficit with rapid, effective airway support, rescue breathing and other advanced airway management techniques.
- c. Although children are given rescue breathing at lower volumes and pressure than adults, wet lungs are stiffer and harder to move. In giving bystanders pre-arrival instructions, make sure that the chest is moving.
- d. Vomiting is common in submersion victims and can complicate the airway support, particularly if it is not anticipated.
- e. Children are more likely than adults to continue to lose body heat when wet, even in warm weather. Replacing wet clothes if possible will minimize heat loss.

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- f. Near-drowning, like most other critical pediatric injuries, is best managed with prevention. Restricting unsupervised access to known water hazards, promoting swimming lessons and teaching bystander CPR are some primary and secondary prevention strategies that EMS systems can advocate.

5 - Electrocution (Time/Life-Critical Event)

- 1. Background:
 - a. All electrocutions should be considered cardiac arrests until proven otherwise.
 - b. Often falls are associated with electrocutions. Always consider the possibility of a long fall.
 - c. The primary concern should be gathering information regarding the safety of the scene and protecting the bystanders by advising them to beware of electrical risks and protecting the rescuers by relaying information about scene safety.
 - d. Electrocutions are often associated with internal burns.
 - e. All electrocutions should be considered high level emergencies.
- 2. Common Causes:
 - a. Industrial accidents, electrical and utility workers electrocuted by coming in contact with high voltage wires. These are often associated

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with long falls. Always consider the possibility of other associated trauma as a result of the fall, and take spinal precautions.

- b. Construction accidents.
 - c. Household accidents associated with electrified water.
 - d. Lightning strikes.
3. Common Symptoms Described by Caller (presentation)
- a. Cardiac arrest.
 - b. Burning sensation or surface burns at contact point. Also there may be burns at the point of grounding.
 - c. Cardiac related problems.
4. Instructions Commonly Provided:
- a. Advise the caller to not come in contact with the electrical source and to beware of electrified water. The caller may attempt to disconnect the electrical source if safe to do so.
 - b. Monitor and maintain patient's airway, especially if patient has a lowered level of consciousness.
 - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.

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- 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - e. Do not move the patient if a fall is involved.
 - f. Call back if the patient's condition changes before help arrives.
 - g. Contact with appropriate utility to secure the scene should be made as soon as possible. This includes P.D. and Fire Department for traffic control and scene control of downed wires in the case of traffic accidents.
 - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations: - NONE

6 - Pregnancy/Childbirth (Time/Life-Critical Event Type)

- 1. Background:
 - a. Gestation encompasses 3 trimesters or time periods. The first trimester includes months 1, 2 and 3. The second trimester includes months 4, 5, and 6. The third trimester includes months 7, 8, and 9.
 - b. As the pregnancy progresses the severity of complications increases for both the mother and the child.

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- c. Bleeding and other complications that occur during the first 7 months of the pregnancy usually represent a miscarriage situation.
 - d. Often the chief complaint will not be related to the pregnancy. If there seems to be no relationship with the pregnancy, the appropriate chief complaint protocol should be accessed, even if the caller informs you of the pregnancy.
 - e. Pregnancy is a condition, not an illness.
 - f. Pregnancy complications in the first and second trimesters, along with vaginal bleeding situations related to gynecological problems, should be handled symptomatically. Usually this requires treatment for shock.
 - g. An imminent birth is defined as any prima gravida woman in her third trimester (first child) with labor pains less than two minutes apart. Any multigravida woman (second + third child) having labor pains less than five minutes apart should be considered an imminent birth as well.
 - h. An imminent birth situation also exists if any part of the baby is showing or the mother complains that the pains are constant and/or she has the urge to push.
2. Common Causes:
- a. Gynecological complaints most often reported include unusually heavy menstrual bleeding or untimely vaginal bleeding.

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- b. Pregnancy related problems included in the first or second trimester usually relate to vaginal bleeding or abdominal pain.
 - c. Imminent births include complaints of labor pains as described above, constant labor pains and/or baby parts showing.
- 3. Common Symptoms Described by Caller (presentation)
 - a. Untimely vaginal bleeding with associated shock symptoms.
 - b. Onset of labor, water breaking, etc.
 - c. Imminent birth as defined above.
- 4. Instructions Commonly Provided:
FOR CHILDBIRTH:
 - a. Do not try to prevent the birth by holding the legs together or crossing the legs.
 - b. Have mother remove all clothing below the waist.
 - c. Get mother on the bed or floor and prop her back up with pillows.
 - d. Have mother take deep breaths during the pains and try not to push.
 - e. Follow specific childbirth pre-arrival instruction scripts as written in the approved EMDPRS.

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FOR PREGNANCY PROBLEMS:

- a. The most common complaint related to pregnancy problems is untimely vaginal bleeding and associated abdominal pain. Symptoms of shock may be described by the caller as pallor, dizziness or lowered level of consciousness, chills, diaphoresis (sweating).
- b. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).

APPLICABLE TO BOTH:

- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
- b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
- c. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.

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- 3) Let patient assume position of comfort.
- 4) Calm and reassure patient.
- 5) Keep the patient warm (maintain body temperature).
- d. Gather or list the patient's medications for the doctor.
- e. Call back if the patient's condition changes before help arrives.
- f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. The pregnant child (under 16) is more likely than an older woman to have become pregnant under circumstances of coercion, rape, incest, or under the influence of drugs or alcohol. She may have sought unusual means to terminate the pregnancy. Some states allow for protection of confidentiality to pregnant minors; consult your local regulations in this regard.

7 - Unconscious/Fainting (Time/Life-Critical Event)

- 1. Background:
 - a. Unconsciousness denotes a state of consciousness from which an individual cannot be aroused, even with painful stimulation.

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- b. A fainting episode denotes a situation from which an individual has previously fainted and has now awakened.
 - c. Single fainting episodes (such as a syncopal episode where the patient faints and then returns to a normal consciousness level) are not considered generally to be high level emergencies, though you should treat all faintings with respect until you are certain there is no immediate danger.
 - d. Multiple fainting episodes are considered to be more serious.
 - e. The primary function of this protocol is to ensure that the patient has an open airway and that it is maintained until help arrives (airway control).
 - f. This protocol should be used when there has been a faint or if the patient is unconscious and the caller does not know why. If the patient is an unconscious diabetic, or seizure patient, the EMD should utilize those protocols specifically.
2. Common Causes:
- a. Stroke, diabetes, cardiac arrest, overdoses, poisonings, intoxication, head injuries, hypoxia, seizures, simple fainting episodes, shock and heart rhythm problems (too slow or fast).
 - b. Conceivably anything that effects the brain in a negative way can render the patient unconscious.

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3. Common Symptoms Described by Caller (presentation)
 - a. Fainting episode or episodes of unconsciousness for unknown reasons.
4. Instructions Commonly Provided:
 - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
 - b. Lay patient on his back and monitor respirations. Turn patient on their side if vomiting occurs.
 - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
 - d. Treat for shock:
 - 1) Keep airway clear.
 - 2) DO NOT GIVE FOOD OR DRINK.
 - 3) Let patient assume position of comfort.
 - 4) Calm and reassure patient.
 - 5) Keep the patient warm (maintain body temperature).
 - e. Gather or list the patient's medications for the doctor.
 - f. Call back if the patient's condition changes before help arrives.

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- g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
 - a. Fainting or unconsciousness in the pediatric patient can be similar to the adult patient in underlying cause and degree of severity. However, there are several special circumstances to consider. In the infant, **Apparent Life Threatening Events (ALTE)** may occur from all the same causes mentioned in the general discussion, as well as from washing of stomach contents up the esophagus (reflux), unsuspected or unreported child abuse, serious bacterial infection and primary apnea (stopping breathing) related to immature respiratory reflexes. Usual reported symptoms will include limpness or stiffening, unresponsiveness, pallor or blue spell, which resolve either spontaneously or with attempts at resuscitation or stimulation. All such infants should be evaluated promptly regardless of how stable they may appear after the event.
 - b. Infants and toddlers are subject to a particular kind of breath-holding spell that is very alarming to witness but usually self-limited. Typically the toddler will become angry or distressed about something and while crying suddenly hold his or her breath, sometimes to the point of unconsciousness, turning blue and possibly resulting in seizures. The hallmark of these episodes is that they occur while the child is crying and resolve on their own after a matter of

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seconds. A second variety of breath-holding in toddlers and young children is related to the fainting adults have when witnessing a distressing event. This spell usually occurs when the child turns pale and becomes unresponsive after a sudden but trivial injury. Both varieties may be difficult to distinguish from more concerning problems unless the child has done this in the past.

Summary

This unit has trained you on the medical content and design of the thirty-two chief complaint types. You have learned about the three types of complaints, and have been trained on the use of your local EMDPRS protocol.

Next, you will complete the course by taking part in a final examination. The exam is comprehensive. It covers all material taught in this course. There will be role-play scenarios where you will be evaluated on your ability to use the knowledge you have gained.

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